CENTRAL VALLEY WATER BOARD STAFF SURVEY WRITE-UP
City of Willows
Wastewater Treatment Plant, Glenn County
MUN Beneficial Use Project
14 March 2012

On 14 March 2012, Anne Littlejohn and Calvin Yang conducted a site visit of the City of Willows Wastewater Treatment Plant's receiving water bodies and the downstream area. The purpose of this trip was to continue the survey work started on March 6, 2012. Mr. Ben Pennock, from the Glenn-Colusa Irrigation District (GCID) participated in the site visit.

The City of Willows Wastewater Treatment Plant is located southwest of the City of Willows (City) in Glenn County. The treatment plant's effluent is released into Glenn-Colusa Irrigation District's (GCID) Lateral 26-2 or Ag. Ditch C. Water from these receiving water bodies is greatly dispersed throughout GCID's district via a large number of canals, laterals and drains. The primary downstream receiving water is Logan Creek, prior to its flow into the Colusa Basin Drain (2047).

The morning of the visit was overcast and breezy with periodic light to moderate rain. The first site was the channel carrying the wastewater effluent out of the treatment plan to Ag. Drain C. Photo 1 shows the channel where it goes under Road 57 on the north side prior to its confluence with Ag. Drain C. Photo 2 shows a pipe over the effluent channel on the opposite side of Road 57 for water conveyance to surrounding parcels.

Southwest on road 57 is the upstream receiving water site on Ag. Drain C (also called North Fork Logan Creek in this section). Photo 3 shows Ag. Drain C, about 100 feet downstream from the RSW-001 site. Photo 4 shows the GCID Lateral 26-2 where it crosses over the Ag. Drain C. Photo 5 shows the downstream receiving water site, RSW-002 after the confluence with the effluent channel from the treatment plant.

The next sites visited were Hunter Creek and Logan Creek where they flow under 4 Mile Road, south of the Sacramento Wildlife Refuge. Photos 6-7 show upstream and downstream views of the Hunter Creek channel at 4 Mile Road. GCID has an acoustic doppler flow station at this site and it was measuring a flow of 0.37 feet/sec. Photos 8-9 show upstream and downstream views of the Logan Creek at 4 Mile Road.

The last sites visited were on the Colusa Basin Drain. The most accessible site upstream of the Colusa Basin Drain's confluence with Logan Creek was at Road 61, as shown in Photo 10. We also visited a downstream site on the Colusa Basin Drain at Maxwell Sellers Road. The site contained heavy vegetation and would not be the ideal location. Another suitable downstream site on the Colusa Basin Drain with good access was not found. In reviewing the map, going further south on the Colusa Basin Drain gets nearer to the Highway 20 upstream Colusa Basin Site for the City of Colusa study area. Staff will investigate the possibility of this site serving both study areas.

There was no public access to the Channel C (Logan Creek) and Ag. Drain C confluence in the Sacramento Wildlife Refuge. Staff will follow up with contacts for that property to see if access will be feasible.

Field measurements and GPS coordinates for the sites visited are summarized in Table 1.

Photo 1. Effluent channel from the City of Willows wastewater treatment plant at Road 57

Photo 2. Water Supply pipe crossing over the effluent channel

Photo 3. Ag. Drain C, 100 feet downstream from the RSW-001 site

Photo 4. GCID Lateral 26-2 over Ag. Drain C

Photo 5. Ag Drain C at RSW-002, downstream of effluent discharge

Photo 6. Hunter Creek, looking upstream, at 4 Mile Road

Photo 7. Hunter Creek, looking downstream, at 4 Mile Road

Photo 8. Logan Creek, looking upstream, at 4 Mile Road

Photo 9. Logan Creek, looking downstream, at 4 Mile Road

Photo 10. Colusa Basin Drain, looking upstream, at Road 61

Table 1. GPS coordinates and General Field parameters

Site Description	Latitude	Longitude	Water Temp. °C	pH	DO (mg/L)	SC (µS/cm)
City of Willows Effluent Channel	39.49500	-122.18925	14.06	7.77	9.47	871
RSW-001, upstream receiving water site on Ag. Drain C (North Fork Logan Creek)	39.49448	-122.19212	13.14	7.98	9.36	534
RSW-002, downstream receiving water site on Ag. Drain C	39.49234	-122.18902	15.43	8.26	11.08	648
Hunter Creek at 4 Mile Road	39.36242	-122.11620	12.46	8.32	10.76	802
Logan Creek at 4 Mile Road	39.36523	-122.11596	12.46	8.06	9.36	884
Colusa Basin Drain at Road 61	39.45745	-122.04204	12.49	8.26	10.82	509
Colusa Basin Drain at Maxwell Road	39.27528	-122.10470	-	-	-	-